

DETAILED ACTION

1. This action is in response to the amendment filed on 7/28/08.
2. Claim 4 has been canceled. New claims 11-14 have been added.

Specification

3. The abstract of the disclosure is objected to because it is in claim format. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-3, 7, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prell et al. USPN 7134508 in view of Comminges US PGPUB 2005/0060893.** Prell discloses a handheld power tool having a motor (inherently provided at the vicinity of drive shaft 64), a planetary gear 74, a tool receptacle as best shown in fig. 3, and a fan 68 located upstream of the motor out of sight of the tool receptacle for generating a cooling air stream that cools the planetary gear, but fails to disclose wherein the fan is provided for generating a cooling air stream flowing through the planetary gear. Comminges teaches the concept of an electrical handheld tool comprising a motor 3, a planetary gear 7, and a fan 15 provided for generating a cooling air stream flowing through the planetary gear for the purpose of efficiently cooling said planetary gear as shown in paragraph 17. At the time the invention was made, it would have been obvious to one having ordinary skill in the art to have modified Prell's fan configured for

generating the cooling air stream flowing through the planetary gear as taught by Comminges in order to efficiently cool the planetary gear.

With respect to claim 2, Comminges teaches wherein the fan 15 is integrated with the planetary gear 7 since they both are located within casing 21 and are both connected to the motor output shaft 3a.

With respect to claim 3, Prell discloses wherein the fan is located between the motor (located at the vicinity of 64) and a gear stage 72 of the planetary gear 74.

With respect to claim 7, Comminges shows wherein the fan 15 is located in the immediate vicinity of a gear wheel 8 of the planetary gear 7.

With respect to claim 11-12, Comminges shows wherein the fan is located inside the casing 21 of the planetary gear 7. With respect to claim 12, it is deemed that the walls of Comminges casing 21 provide a plate which retains the fan 15 and planetary gear 7 therein.

With respect to claim 13, Prell shows a disk 68 positioned between the fan 78 and the planet wheels 74 as shown in fig. 3.

5. Claims 5-6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prell et al. USPN 7134508 in view of Comminges US PGPUB 2005/0060893 as applied to claim 1 above, and further in view of Sakurai JP 09-011158. The modified invention of Prell discloses a housing having a ventilation opening 18 and a ventilation conduit which extends from the motor 3 through the planetary gear 7 to the ventilation opening as taught by Comminges, but fails to disclose an air inlet. Sakurai teaches the concept of a power tool comprising a motor 5, a gear arrangement 8, and a fan 7; a housing having air inlet 13 and outlet 14 ports, and a ventilation conduit 18 extending continuously between said inlet and outlet ports for the purpose

of enhancing cooling of the internal components within the housing. At the time the invention was made, it would have been obvious to one having ordinary skill in the art to have provided the modified invention of Prell further having air inlet ports as taught by Sakurai in order to properly cool the planetary gear.

Sakurai also shows a coupling region 3 and at least one ventilation conduit 18 extending from the coupling region 3 to the motor (claim 6). The fan generates an air stream directed in a radial direction relative to said fan and includes deflection means via 3, 16 for deflecting the air stream in an axial direction through conduit 18 (claim 10).

6. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prell et al. (USPN 7,134,508) in view of Comminges US PGPUB 2005/0060893 as applied to claim 1 above, and further in view of Nishikawa et al. (USPN 6,779,612). Prell discloses a power tool having a fan configured to generate air stream for cooling a planetary gear, but fails to disclose wherein the fan rotates in two directions of rotation and generates an air stream in a same direction independent from the direction of rotation of said fan. Nishikawa teaches the concept of a power tool having a motor and a fan assembly rotatable in two directions of rotation, i.e. forward and reverse, wherein in both directions of rotation said fan generates an air stream in a same axial direction along a housing 3 and passing through the motor for the purpose of effectively cooling the motor when it rotates in either direction (see col. 1, lines 6-10 and col. 3, lines 1-4). The substitution of one known element (a fan rotatable in two directions as shown in Nishikawa) for another (a fan rotatable in one direction as shown in Prell) would have been obvious to one of ordinary skill in the art at the time of the invention since the substitution of the fan shown in Nishikawa would have yielded predictable results, namely, generation of air stream

in a same axial direction through the planetary gears of Prell to cool said planetary gear independently of the direction of rotation of said fan.

With respect to claim 9, Nishikawa also shows wherein the fan has blades 2 with at least two faces, one face facing to a first direction of rotation 10 and the other face facing to a second direction of rotation opposite to the first direction of rotation, wherein both blade faces direct air at least partly in a same axial direction along the housing 3 as broadly claimed.

Response to Arguments

7. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

For the reasons above, the grounds of rejection are deemed proper.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Lopez whose telephone number is 571-272-4464. The examiner can normally be reached on Monday - Thursday: 8:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ML/
Patent Examiner

/Rinaldi I Rada/
Supervisory Patent Examiner, Art Unit 3721